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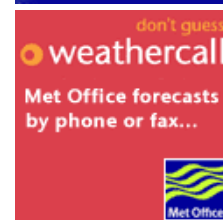
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Understanding past climate boosts confidence in prediction

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Scientists from most parts of the world agree that global warming is already with us. Debate rages on, however, as to whether the warming is man-made or natural. New research conducted by scientists at the Met Office and the UK Universities Global Atmospheric Modelling Programme shows that both are contributory factors.

Until now, climate simulations had difficulty explaining the rapid increase in global temperatures between 1910 and 1940. Earlier simulations ignored natural factors such as the sun's influence and volcanic eruptions. For the first time, this new research combines the most important human and natural factors in one climate model. The result, reported in this week's *Science*, accurately mirrors the decadal changes in global temperatures over the last 100 years.

Importantly, there is strong evidence that man-made greenhouse gas emissions are responsible for global warming over the past few decades. On the other hand the sun and volcanoes played a significant part in controlling temperatures during the first half of the twentieth century.

Dr Peter Stott from the Met Office's Hadley Centre leads the research team and believes that the work is another example of increasing confidence in climate predictions.

"This model is still not perfect but, by successfully simulating past temperature changes, it demonstrates the credibility of our climate predictions", said Dr. Stott. "Our predictions show that the current rate of warming of 2 to 3°C per century is likely to continue over the coming decades. However, there is much more work to do if we are to provide the predictions needed to assess the impacts of climate change on individual countries."

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